



PRELIMINARY REPORT INDUSTRY SERIES

1982 Census of Construction Industries

CC82-I-10(P)
Issued February 1984

PLUMBING, HEATING (EXCEPT ELECTRIC), AND AIR CONDITIONING SPECIAL TRADE CONTRACTORS (Industry 1711)

During 1982, the establishments with paid employees classified in this industry accounted for \$33.5 billion in total business receipts. Of this amount, \$32.6 billion were receipts for construction work. These establishments paid out \$12.7 billion for materials, components, supplies, and fuels and \$3.8 billion for construction work subcontracted to others. This industry had total average employment of 510,871 employees with total payroll of \$9.9 billion. Value added for 1982 was \$16.9 billion.

Establishments classified in this industry are primarily engaged in plumbing, heating (except electric), or air conditioning work or any combination of these types of work. Sheet metal work combined with any of these types of work is included in this industry, but roofing and sheet metal contractors are classified in industry 1761. For specific examples, refer to the 1972 Standard Industrial Classification (SIC) Manual, and its 1977 supplement, published by the Office of Management and Budget, Executive Office of the President.

For this census, a "construction establishment" was defined as a relatively permanent office or other place of business at which or from which the usual business activities related to construction were conducted. A separate census report was required from each establishment but not from each construction site. Instead, the data for work at each site were included in the report from the appropriate office or branch office. Foreign construction activities were not included in this census.

The 1982 estimates for establishments with paid employees in all of the construction industries are based on reports from a probability sample of approximately 172,000 establishments selected from a universe of about 498,000 construction establishments with payroll. The data obtained from the sample were weighted to represent all construction establishments with payroll. Complete descriptions of the sampling and estimating procedures will be included in the final reports.

Since the data in this report are based on a sample, they are subject to sampling variability and may be expected to differ from results which would have been obtained if a complete census had been taken using the same questionnaires and procedures. The relative standard error shown in the tables is a measure of sampling variability, i.e., the variation that might occur by chance because only a sample of the population was surveyed.

All data shown are based on current dollars for the years specified and have not been adjusted for inflation.



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Table 1. General Statistics for Establishments With Payroll by States: 1982 and 1977

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see page 4]

Location of establishment	1982							
	Number of establishments	Employees**		Payroll		Construction worker hours (thousands)	Total construction receipts	Net construction receipts†
		All	Construction workers	All employees	Construction workers			
A	B	C	D	E	F	G	H	
United States	59 830	510 871	396 772	9 857 470	7 474 250	699 797	32 613 083	28 803 193
Alabama	809	5 952	4 706	88 103	66 602	8 267	323 142	291 194
Alaska	138	1 876	1 457	42 506	32 212	2 517	150 235	127 483
Arizona	871	7 693	5 887	138 206	103 859	10 102	450 297	417 190
Arkansas	598	3 438	2 740	48 188	38 358	4 663	185 007	164 082
California	5 225	50 602	38 019	1 146 446	851 814	63 826	3 587 219	3 245 272
Colorado	1 135	9 596	7 545	190 699	147 558	13 062	646 589	549 528
Connecticut	957	7 131	5 549	151 893	115 878	10 219	468 787	411 145
Delaware	199	3 347	2 814	76 262	66 364	5 171	152 990	140 531
District of Columbia	69	1 043	792	19 373	12 615	1 318	62 795	58 260
Florida	3 377	33 728	27 029	556 658	434 274	48 993	1 874 754	1 699 412
Georgia	1 421	12 188	9 709	188 932	138 965	17 433	729 634	643 151
Hawaii	220	2 338	1 762	45 784	34 422	2 949	137 566	127 470
Idaho	266	1 620	1 217	27 531	21 744	2 066	100 667	90 964
Illinois	2 774	23 120	17 716	537 848	416 702	30 642	1 546 335	1 388 256
Indiana	1 328	11 651	8 931	235 505	180 360	15 825	726 170	627 774
Iowa	912	4 850	3 625	83 590	62 598	6 194	274 505	245 532
Kansas	806	5 766	4 344	97 307	73 308	7 594	325 353	291 561
Kentucky	895	6 748	5 308	115 137	87 647	9 462	399 518	353 508
Louisiana	1 053	8 871	7 158	160 822	124 027	12 538	556 410	490 214
Maine	310	1 679	1 304	24 934	18 479	2 370	96 272	85 162
Maryland	1 295	13 708	10 580	245 886	176 214	19 026	900 218	756 360
Massachusetts	1 624	11 490	8 763	222 488	164 855	15 551	765 550	675 039
Michigan	1 760	13 036	9 887	274 944	208 199	17 404	913 925	761 728
Minnesota	1 116	9 998	7 623	242 098	185 295	13 137	705 059	599 111
Mississippi	511	3 451	2 883	48 035	40 136	5 311	177 164	158 665
Missouri	1 243	10 391	7 998	212 782	164 729	13 674	699 151	612 722
Montana	235	1 038	770	19 712	14 907	1 245	74 921	62 170
Nebraska	547	3 246	2 416	55 460	40 386	4 232	190 434	172 603
Nevada	295	2 367	1 831	52 713	40 943	3 048	182 946	157 869
New Hampshire	271	1 582	1 175	27 046	19 890	2 158	102 623	88 745
New Jersey	2 333	18 041	14 126	381 941	290 711	25 095	1 213 096	1 064 179
New Mexico	443	3 023	2 354	45 504	35 436	4 073	166 245	145 526
New York	3 911	32 419	24 810	638 906	481 683	43 669	2 245 450	1 939 714
North Carolina	1 899	16 362	13 186	240 659	181 797	23 839	804 794	738 877
North Dakota	194	1 610	1 297	34 857	28 952	2 259	115 086	102 043
Ohio	2 502	21 373	16 140	458 154	348 835	28 399	1 361 613	1 192 895
Oklahoma	994	6 727	5 383	119 964	92 582	9 339	436 084	395 440
Oregon	632	3 774	2 757	82 591	60 644	4 552	254 936	222 217
Pennsylvania	2 885	27 426	21 350	565 916	433 927	37 797	1 844 524	1 616 851
Rhode Island	261	1 585	1 242	26 962	19 874	2 233	106 262	84 596
South Carolina	847	8 457	6 676	126 544	91 627	12 604	413 491	376 071
South Dakota	172	(S)	(S)	(S)	(S)	(S)	(S)	(S)
Tennessee	976	8 350	6 719	133 584	99 481	11 744	485 105	434 401
Texas	4 487	46 601	37 016	841 121	630 366	67 750	3 075 652	2 747 740
Utah	439	3 281	2 580	65 976	51 924	4 587	251 887	205 897
Vermont	171	827	659	11 326	8 207	1 127	44 617	39 354
Virginia	1 520	14 084	11 067	220 020	159 956	20 275	750 073	663 911
Washington	919	7 222	5 189	169 985	126 839	8 386	585 619	493 337
West Virginia	318	2 219	1 776	35 974	28 186	3 127	101 420	95 549
Wisconsin	1 454	11 746	9 169	246 881	193 691	16 148	730 605	647 362
Wyoming	199	1 201	953	19 297	15 577	1 505	66 564	57 415

1982—Con.						1977			Relative standard error of estimate (percent) for column—			Location of establishment
Value added††	Payments for materials, components, supplies, and fuels	Payments for construction work sub-contracted to others	Rental payments for machinery, equipment, and structures	Capital expenditures, other than land	End-of-year gross book value of depreciable assets	All employees**	Total construction receipts	Value added††				
I	J	K	L	M	N	O	P	Q	B	H	M	
16 933 312	12 724 731	3 809 889	363 915	437 249	4 560 201	458 687	21 072 098	10 681 068	(W)	(W)	(W)	U.S.
148 998	146 349	31 948	3 044	4 800	59 720	8 826	304 385	148 076	4	3	7	Ala.
74 557	62 787	22 752	1 187	2 197	18 915	1 006	74 189	42 195	4	6	6	Alaska
229 467	195 395	33 107	5 919	7 792	63 786	4 962	215 644	111 807	3	3	5	Ariz.
87 709	79 031	20 925	1 924	2 554	35 242	3 704	163 331	68 015	5	5	10	Ark.
2 055 964	1 285 918	341 947	52 540	46 885	496 386	42 111	2 272 045	1 255 944	1	(W)	2	Calif.
363 630	259 207	97 061	8 040	7 773	75 943	6 966	315 302	155 978	2	2	3	Colo.
262 539	171 143	57 642	4 842	4 944	59 738	5 743	268 540	137 349	3	2	4	Conn.
108 467	33 524	12 458	2 011	1 267	12 892	3 374	109 756	77 695	3	3	7	Del.
33 675	(D)	4 534	705	727	8 974	1 391	86 108	40 440	6	5	4	D.C.
920 239	841 684	175 342	20 319	26 497	268 071	21 809	825 354	403 149	1	1	2	Fla.
320 996	329 883	86 482	7 392	9 135	94 770	12 126	449 778	213 030	3	2	4	Ga.
87 089	43 979	10 095	1 957	1 421	21 075	1 731	87 336	50 473	15	5	10	Hawaii
50 167	45 879	9 703	1 035	1 504	17 471	1 843	93 470	43 273	8	7	11	Idaho
873 078	542 627	158 078	16 569	18 491	244 176	23 431	1 216 157	658 639	1	1	2	Ill.
381 106	267 515	98 395	8 903	8 891	97 311	11 828	532 152	281 171	2	2	3	Ind.
140 926	111 031	28 973	3 042	3 592	58 836	6 703	328 283	155 158	4	3	6	Iowa
165 696	136 818	33 792	3 837	3 847	52 044	5 507	233 678	118 589	5	3	7	Kans.
199 829	157 791	46 009	4 237	6 786	66 230	6 653	274 890	137 626	3	2	5	Ky.
271 455	227 417	66 196	5 500	8 836	87 254	8 825	388 423	189 489	3	2	4	La.
48 254	39 889	11 110	975	982	12 755	1 579	60 910	31 161	8	7	11	Maine
428 559	340 507	143 858	9 314	12 546	105 474	12 309	549 142	260 151	2	1	2	Md.
411 640	283 530	90 510	7 269	8 972	90 021	9 829	447 992	219 753	2	2	3	Mass.
458 802	325 288	152 197	10 410	11 400	130 856	15 684	864 266	436 163	2	1	3	Mich.
349 474	265 972	105 948	8 589	11 802	108 164	8 394	424 172	205 772	2	2	2	Minn.
89 534	75 014	18 499	1 740	3 027	30 525	3 392	125 767	60 092	5	5	4	Miss.
378 468	243 400	86 429	6 536	6 422	100 981	10 776	529 245	275 509	2	1	2	Mo.
33 874	31 507	12 750	907	717	15 379	1 705	77 480	41 089	9	9	12	Mont.
95 806	85 890	17 831	2 124	2 282	31 693	3 910	193 934	89 661	5	4	10	Nebr.
105 279	69 785	25 077	2 603	3 097	25 987	1 898	108 916	57 494	4	3	8	Nev.
46 856	45 803	13 878	993	1 170	15 005	1 468	58 846	31 084	8	6	11	N.H.
661 729	416 283	148 916	10 034	14 225	140 431	13 645	656 498	331 224	1	1	3	N.J.
79 005	71 588	20 719	1 778	2 834	27 600	2 641	100 017	50 127	6	6	8	N. Mex.
1 177 679	791 141	305 735	18 559	26 915	302 334	25 491	1 204 830	648 666	1	1	2	N.Y.
404 754	350 427	65 917	9 061	13 482	118 437	14 908	501 398	238 921	2	2	2	N.C.
55 671	47 611	13 043	695	1 064	15 692	1 627	71 144	37 319	6	4	10	N. Dak.
749 229	467 088	168 718	15 732	14 896	186 338	22 725	1 120 852	572 207	1	1	2	Ohio
215 896	187 083	40 644	4 540	6 530	65 116	5 846	257 501	121 609	4	3	9	Okla.
135 293	95 547	32 719	3 969	2 981	35 225	4 501	251 818	132 877	3	3	8	Oreg.
968 529	676 664	227 673	21 562	24 055	232 110	22 338	1 069 739	532 259	1	1	2	Pa.
43 654	42 111	21 666	809	781	11 932	1 569	81 856	38 477	7	6	12	R.I.
200 278	186 057	37 420	3 170	6 657	67 305	7 426	244 573	114 077	3	2	5	S.C.
(S)	(S)	(S)	(S)	(S)	(S)	1 215	49 353	27 301	-	-	-	S. Dak.
230 663	218 224	50 704	4 451	7 318	84 758	8 998	360 532	156 294	3	3	8	Tenn.
1 482 396	1 358 271	327 912	34 908	51 028	379 936	35 928	1 601 890	761 578	1	1	2	Tex.
115 701	94 349	45 990	4 103	4 371	38 948	3 106	157 109	74 790	5	4	5	Utah
20 981	(D)	5 263	522	934	5 913	803	28 701	13 020	10	11	13	Vt.
378 372	335 000	86 161	8 152	10 712	106 057	13 194	484 201	240 239	2	2	4	Va.
303 077	210 455	92 282	7 708	6 059	71 717	8 301	460 424	240 738	2	2	5	Wash.
55 994	43 588	5 870	1 108	1 368	19 998	2 051	80 619	49 468	6	5	11	W. Va.
376 387	290 934	83 243	6 922	9 033	117 610	11 895	587 307	282 979	2	1	3	Wis.
32 153	27 758	9 149	1 072	715	12 558	998	42 257	20 886	10	7	15	Wyo.

Table 2. Construction Receipts for Establishments With Payroll by Type of Construction: 1982 and 1977

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see page 4]

Item	1982	1977	Relative standard error of estimate (percent)	
			1982	1977
Total construction receipts -----	32 613 083	21 072 098	(W)	(W)
Building construction -----	26 443 999	17 405 490	(W)	(W)
Single-family houses -----	5 951 095	5 300 435	1	1
Apartment buildings with two or more apartments -----	1 896 017	1 436 195	1	1
Other residential buildings -----	859 351	507 915	1	1
Industrial buildings and warehouses -----	5 708 791	3 491 744	(W)	(W)
Office and bank buildings -----	4 952 845	1 684 996	(W)	1
Stores, restaurants, public garages, and automobile service stations -----	2 351 322	1 315 319	1	1
Religious buildings -----	393 459	301 401	1	1
Educational buildings -----	1 520 814	1 355 409	1	1
Hospitals and institutional buildings -----	2 344 463	1 643 221	(W)	(W)
Amusement, social, and recreational buildings -----	168 592	157 863	3	2
Other nonresidential buildings -----	297 250	210 992	3	3
Nonbuilding construction -----	2 832 277	1 860 275	(W)	1
Power plants -----	998 036	377 069	(W)	1
Sewer, water mains, and related facilities -----	459 520	413 588	2	3
Sewage treatment and water treatment plants -----	559 245	416 859	1	1
Other nonbuilding construction -----	815 476	652 759	6	2
Construction work, n.s.k. -----	3 336 807	1 806 697	1	1

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The following abbreviations and symbols are used in the tables in this publication:

- * Sampling error exceeds 40 percent.
- ** All employees (average) is the sum of construction workers during pay period including 12th of March, May, August, and November divided by 4, added to all others, March 12th.
- Represents zero.
- † Represents total construction receipts less payments for construction work subcontracted to others.
- †† Represents all business receipts less payments for construction work subcontracted to others, and payments for materials, components, supplies, and fuels. In SIC's 1531 and 6552, land receipts are also subtracted from "all business receipts."
- (D) Withheld to avoid disclosing data for individual companies; data are included in higher level totals.
- (NA) Not available.
- (S) Withheld because estimate did not meet publication standards on the basis of either the response rate, associated standard error, or a consistency review.
- (W) Greater than zero but less than 1 percent.
- (X) Not applicable.
- n.s.k. Not specified by kind.

